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ABSTRACT

Addressed to the Minnesota State Legislature, this report on Minnesota's Early Childhood Health and Developmental Screening Program discusses issues related to program goals and program implementation, overviews the program, and reports and summarizes statewide program results for 1985-86. Issues discussed concern responsibility for the program, cost effectiveness, effects of reduction in funds, scope of effort, relation of the program to early childhood family education and special education programs, and future trends in early childhood screening. The program overview focuses on Minnesota legislation and rules mandating and regulating health and developmental screening, and the February, 1985 revised handbook for the early childhood screening program. Reported program results describe participation in screening, concerns that were identified, and staffing patterns. An appendix provides Minnesota statutes regulating preschool health screening. Also included in the report is a copy of the Minnesota State Board of Education's resolution of support for early childhood health and developmental screening. (RH)

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DIVISION OF DEVELOPMENT AND PARTNERSHIP

REPORT TO THE LEGISLATURE ON THE EARLY CHILDHOOD HEALTH AND DEVELOPMENTAL SCREENING PROGRAM 1985-86

Prepared in accordance with
Minnesota Statute 123.703
Subdivision 3

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EARLY CHILDHOOD HEALTH AND DEVELOPMENTAL SCREENING

Educators and health professionals focus on the normal aspects of a child's health and development, identifying and reinforcing these while sorting out conditions and situations that require further attention, referring the children and families to several sources of services and care in the school and community.

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ADDRESSING THE ISSUES

Review of the Early Childhood Health and Developmental Screening program offers the opportunity to ask some essential questions about the goals and implementation of the program.

A. WHO SHOULD BE RESPONSIBLE FOR THE EARLY CHILDHOOD SCREENING PROGRAM?

School districts can best administer this program.

1. The effectiveness of the school is more affected than is any other agency by the status of children's health and development.
   - a. Early identification of health and developmental problems gives time for remediation prior to the child's entrance into kindergarten.
   - b. Early Childhood Screening provides data on individual children, establishing a basis for later comparison of ongoing growth and development.
   - c. Information obtained on the group of children participating in Early Childhood Screening gives the school district the opportunity to plan for education and health programs, making better use of time and resources in both current and future school programs and services.

2. The school has a unique relationship with children, families, and communities, and is able to reach and serve them in a way not available to other agencies or services.
   - a. In a community, most families with children are and expect to be involved in school issues. Not all families interact with social services or public health service agencies.
   - b. An important link is established between the family, child, and school affecting future interaction. This link includes early planning for individual children with special needs and also includes parent volunteer involvement in school programs.

3. Education of children and parents is an integral part of the screening process.
   - a. Part of the educational emphasis at screening is a review and reinforcement of the parent's critical role as providers of good health care and educational development for their children.

(Continued)

3. (Continued)		b. Education and information in child development and parenting skills is provided in various components of the screening program including the summary interview, group presentations, video tapes, and through reading materials.
		c. Critical new issues are incorporated annually into the program, such as child safety (accidents are the leading cause of death in this age group), seat belt use, child abuse identification and prevention, etc.
		d. Education is provided to children, encouraging positive health practices and self responsibility as is appropriate to their age.
4. Families without an ongoing source of health care from a doctor and/or dentist are identified and put in contact with community professionals. Parents are encouraged to continue regular health maintenance care for all family members.		a. Parents usually bring their infants to see health care providers for well child checkups and for immunizations, but do not follow through with regular well child care for 3 and 4 year olds--critical developmental years.
		b. The majority of young children have not had dental care prior to their Early Childhood Screening visit, yet 50% of 2 year olds have dental caries.

B. IS EARLY CHILDHOOD HEALTH AND DEVELOPMENTAL SCREENING A GOOD INVESTMENT OF STATE TAX DOLLARS?

Yes. Long-term savings result from early identification of health and developmental problems, especially those that affect learning.

1. The number and severity of long-term health and developmental problems are reduced.	a. Early childhood screening has been an effective tool in identifying health and developmental problems (see Tables 4 and 5 of this report for percentages of findings and referrals for 1985-86).
	b. Many concerns raised by parents regarding children's health and behavior are discussed and new approaches given that prevent complications or later problems and that enhance the child's learning experiences.
	c. With the elimination of the physical inspection as a required component in 1982, fewer health related problems are now being found.
2. Not only are problems identified in children, but children's health and development are also identified as being within normal ranges. This is valuable information for for educational planning.	a. Health factors influence learning and growing to such an extent that educational planning should proceed only if health has been ruled out as an interfering factor.
	b. Knowing a child is within developmentally normal ranges also provides parents and educators the evidence to proceed with regular educational opportunities.
3. Summary information from the screening program can be incorporated into school district planning for both educational and health programs.	a. Local district planning needs to take into consideration the needs or resources students bring to school so that learning experiences can be provided in a meaningful way.
4. Early Childhood Screening with its 9 year history is a service that many parents seek and have come to recognize as an important service.	a. In Minnesota, 80 percent of eligible children are screened. Early Childhood Screening has one of the highest participation rates by parents in any voluntary program. This is evidence of the value placed on the program each year by communities.

(Continued)

4. (Continued)		b. Educators and parents establish a relationship that provides for ongoing communication in dealing with health and developmental problems.
		c. School districts report that parents see Early Childhood Screening as a positive experience for their child and themselves and find the input accurate and helpful.
5. Local screening coordinators, many of whom are assuming responsibility for management of the screening program as an adjunct to their other roles as principal, school nurse, community education directors, etc., are highly invested in the program, willing and eager to improve the quality of the service.		a. The University of Minnesota's Early Childhood Assessment (1982-83) found that screeners and coordinators were concerned and committed individuals interested in evaluating and improving the screening program wherever necessary and/or possible.

C. WHAT EFFECT IS THE FUNDING REDUCTION FOR 1986-87 HAVING ON THE EARLY CHILDHOOD SCREENING PROGRAM?

It will be difficult and, in some cases impossible, for districts to carry our the program as the legislature envisioned in 1977.

1. In 1977, Minnesota became the first state to offer all children comprehensive health and developmental screening at no cost to parents.

   a. Other states contacted Minnesota to learn about the program while they considered establishing similar programs for young children.

   b. Following Minnesota's lead, 42 states now mandate some form of screening in the early years before school (U.S. Department of Education, 1985).

2. At the time of state financial crisis in 1982, some components of Early Childhood Screening were changed from required status to optional status and funding was allocated only for required components. Now the impact of the reduction enacted in 1985 for the 1986-87 program year is putting an additional strain on quality of the program. The funding was reduced by $8 per child, cutting the funding in half.

   a. Required components:

   vision screening
   hearing screening
   growth screening -
     height and weight
   developmental screening:
     speech/language
     fine and gross motor
     social/emotional
     cognitive
   summary interview

   Optional components

   physical inspection
   laboratory tests
   dental inspection
   nutritional assessment
   others as approved

3. Few districts can afford a comprehensive program. Cuts in funding further reduce the capability of districts to offer a program that provides a comprehensive picture of each child. Most districts have already been supplementing the state aid with local funds.

   a. In the past 12 percent of districts were still able to provide a complete screening, often charging parents for this service.

   b. 39 percent were able to offer one or more of the optional components, usually a modified dental inspection and nutrition review.

   c. 61 percent could provide only the required components.

(Continued)

4.	Volunteers are used for for portions of the screening in most districts. Increased use of volunteers is not a realistic nor effective option in most districts.	a. Volunteers, trained and supervised by professionals, have been found by the University of Minnesota's study to be accurate screeners.
		b. Volunteers are not, however, always available in sufficient numbers, not qualified in all areas, require recruitment and supervision, and require at least annual training. Volunteers do not come without cost to the screening program.
5.	Requiring parental fees to help defray expenses may jeopardize the program's availability.	a. Since participation in the Early Childhood Screening program is voluntary on the part of families, those who feel they cannot afford the services may decide not to participate. Paying for preventive services such as those provided in Early Childhood Screening is often not a priority in families who are economically strained.
		b. If only a few children were screened, aggregate data would not provide a complete picture of a community's young children and would not be useful in planning education programs including curriculum and student services.
6.	The need for quality early childhood screening is increasing.	a. Due to recent advances in the medical field, more premature and critically ill infants are living, many of whom have physical and developmental delays that become evident as they grow and mature. These can be identified through screening.
		b. The increasing number of dysfunctional families, as well as families in which both parents are working (resulting in less time with their children) makes early childhood screening a valuable means of reinforcing parenting skills, highlighting the needs of young children and identifying problems.

9 (Continued)

6. (Continued)

c. School readiness remains a major concern of parents. They recognize the advantages of early intervention on problems, appreciate the availability of screening and the opportunity to begin early treatment when indicated. They also appreciate resources for stimulating early learning skills for their young children.

d. The public is becoming more aware of the early years as being a critical time to engage children in learning and growing experiences. The schools, then, are expected to be able to identify problems that may interfere with learning, just as this service is expected for school age learners.

D. HOW COMPREHENSIVE SHOULD THE SCREENING BE?

In order to obtain an overall picture of a child and to identify problems in every area, both health and educational aspects need to be part of the screening process.

1. Educators and health professionals recognize the interdependence of health and development.

   a. Both the status of health and level of development affect the ability to learn.

   b. A child's nutritional status, for example, not only has a direct effect on the proper functioning of the body's health systems and the ability to combat acute and chronic diseases (affecting absenteeism), but it also affects the child's ability to concentrate and to retain information.

   c. Likewise, a neurological problem can be reflected in both the child's muscle coordination and in the ability to learn--to gain and process information.

   d. Health screening is beneficial for educational, as well as medical purposes, just as educational screening is beneficial for health, as well as learning purposes.

2. The ability to gain a comprehensive picture of the child has been altered so that the screening findings are more fragmented and, perhaps, less accurate now than when all components were required.

   a. Several health related components (physical inspection, dental inspection, lab work, nutritional analysis) are no longer required and, therefore, no longer part of every district's screening program.

   b. Health and developmental findings, in a comprehensive program, can be integrated. For example if a hearing problem is noted, observation of the ear canal, a health history of ear infections and a review of the child's behavior would assist in determining the steps and priorities for remediating the problem. Expensive and inappropriate service and treatment could be avoided.

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3.	In screening both health and development factors at the same time, parents come to realize the connection between these two in the learning process.	a.	Parents' observation skills are sharpened, leading to better identification of future childhood illnesses and learning problems, prompt treatment, and finally, leading to better prevention of health, emotional and learning problems.

E. HOW DOES THE EARLY CHILDHOOD HEALTH AND DEVELOPMENTAL SCREENING PROGRAM (ECS) RELATE TO EARLY CHILDHOOD FAMILY EDUCATION (ECFE) AND EARLY CHILDHOOD SPECIAL EDUCATION PROGRAMS (EC:SE)?

Communication and coordination among these three programs is essential and ground work has been laid among the programs.

1. Each program has a distinct focus. (Early Childhood Screening is directed to all 3 1/2 to 4 year olds). All three are concerned with meeting a child's health and developmental needs prior to kindergarten.

   a. When problems are noted at screening, the children are referred to Early Childhood: Special Education for assessment of potential handicapping conditions. Early Childhood Screening is one vehicle for meeting the federal Child Find mandate.

   b. Children and their families are referred to Early Childhood Family Education for learning experiences for parents and for young children.

   c. With the establishment of the Early Childhood Family Education Program, districts are finding that parents are seeking screening for their children because they recognize the importance of health and development on their children's current experiences and future learning experiences. Some are requesting screening at a younger age.

   d. Minnesota Department of Education Early Childhood program staff are in frequent communication to build appropriate linkages among the programs.

2. Early Childhood Screening with its long history of success and acceptance. Its community network of staff and resources can be an asset as new early childhood programs emerge and develop.

   a. District Early Childhood Screening coordinators are encouraged to collaborate with existing and emerging early childhood programs.

F. WHAT ARE FUTURE TRENDS IN EARLY CHILDHOOD SCREENING?

The significance of a child's early years is becoming more fully documented and understood. The future will bring further refinement to the screening tools and process and more coordination among school and community programs for young children.

1.	Already in 1977, Minnesota recognized the importance of early childhood through the establishment of the Early Childhood Screening program. The state has the opportunity to continue its leadership.	a. Minnesota has expanded and added at least two exemplary early childhood programs in recent years. b. Most recently, the 1985 study of educational programs for 4 and 5 year olds shows continued commitment.
2.	Early Childhood Screening with its long history and established networks is in a position to help shape future directions and implement the results of increased understanding of young children.	a. As a school-related program with significant community involvement, Early Childhood Screening has a high level of participation and acceptance. There is potential for maintaining a child/family emphasis for this rapidly changing field.
3.	The quality and amount of information that can be obtained at screening will improve.	a. As research continues, screening tools are being refined. Especially true in the area of child development, screeners will be able to more clearly elicit an accurate picture of children's strengths and weaknesses. b. Specialists in the field of early childhood are emerging; this will alter the make-up of the local Early Childhood Screening team, especially in the developmental component.
4.	In communities, state and local programs and services are building better networks so that problems identified at screening can be readily referred to the most appropriate services.	a. Early Childhood Screening is provided by an interdisciplinary team, often delivered through an interagency agreement. A good network is built through the referral system. b. The Early Childhood Family Education Advisory Committee often includes the Early Childhood Screening Coordinator or staff, thereby building linkages that share resources and reduce duplication.

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4. (Continued)		c. Planning for consistent delivery of Early Childhood Screening has been on the agenda of the newly established county committees that focus on handicapped children 0-4 years old.
5. Parents with increased awareness in the importance of the early childhood years will continue to want comprehensive, reliable screening services for their children.		a. Parenting skills and school readiness of children will remain high priorities.
6. As the public continues to press for accountability by the schools, it will be essential to identify deterrents to learning and to address these problems early.		

OVERVIEW

EARLY CHILDHOOD HEALTH AND DEVELOPMENTAL SCREENING

The Minnesota Legislature established the Early Childhood Health and Developmental Screening program (formerly the Preschool Screening Program - PSS) in 1977.

According to state statute, the purpose of the program is to assist parents and communities in:

Improving the health of Minnesota children
Planning educational programs
Planning health programs

The goals of the program are to:

Reduce later need for more costly care
Minimize physical handicaps
Minimize educational handicaps
Aid in rehabilitation

Legislation provides that the vehicle for accomplishing the above is early detection of children's health and developmental concerns.

The Early Childhood Health and Developmental Screening Law (M.S. 123.701-123.705) and rules (Minnesota Rules 3530.3000-.4310) require that all school districts offer a health and developmental screening to all children at least once before entering kindergarten. Participation in the screening is voluntary on the part of the child, is to be offered at no cost to the parents, and cannot be a requirement for school enrollment.

The Department of Education reimburses each school district for the actual costs of the required components of the screening program (including coordination, outreach, screening and follow-up) up to a maximum rate set by the Legislature on a biennial basis. The rate for F.Y. 86 was $16.15 per child screened, and for F.Y. 87, $8.15. Reimbursement can be claimed for one screening per child.

To supplement the resources committed by the State Legislature to Early Childhood Screening, other funding sources may be sought. Districts may choose to request information on Medical Assistance eligibility from parents, making it possible to obtain federal Title XIX funds. Use of these federal funds is, however, limited because the required components of Early Childhood Screening make the program incompatible with the more comprehensive requirements of Early Periodic Screening, Diagnosis and Treatment (EPSDT, federal program managed by the Department of Human Services). While additional funding sources are used in some districts, most are unable to access enough funding to operate an Early Childhood Screening program which includes the various components required by the legislature when the program was established in 1977.

When established in 1977, Early Childhood Screening was a comprehensive program requiring that all the components listed on the next page (both required and optional) be offered by local districts. The program was trimmed in 1982 in response to the state's fiscal crisis. Districts are currently reimbursed (up to a specified amount) only for the costs of providing the required components of Early Childhood Screening.

Required components of Early Childhood Screening include:

- Vision screening
- Hearing screening
- Growth screening: height and weight
- Health history and immunization review
- Developmental screening: speech/language, fine and gross motor, social/emotional, cognitive
- Summary interview

Optional components of Early Childhood Screening are:

- Physical inspection
- Laboratory tests
- Dental inspection
- Nutritional assessment
- Others as approved

(See Appendix A for the current state Early Childhood Screening law.

Each local district annually plans its Early Childhood Screening program according to criteria set in the law and rules. School boards may establish the program individually, in cooperation with other districts, through regional educational cooperative service units or in conjunction with other community screening programs.

The Handbook for the Early Childhood Screening Program (revised in February 1985) encourages districts to use The Planning, Evaluation and Reporting guidelines known as PER (M.S. 123.74) in establishing their individual screening operations. The handbook presents the PER tool and the major issues of Early Childhood Screening on a worksheet format for use by the Early Childhood Screening local coordinator and team of screening providers.

Early Childhood Screening is based on the concept that comprehensive screening detects potential health problems and actual deviations of growth and development. The program is not a substitute for ongoing family health care nor for participation in early childhood educational opportunities, but does attempt to identify problems and, when indicated, channel the child and family to appropriate facilities for follow-up care. If a child's screening indicates a condition that requires further evaluation, the child's parents are notified of the condition and referred for health and/or educational diagnosis and treatment. A referral may also be made to various community resources that offer educational enhancements for children and families and support for positive parenting. An appropriate follow-up process is available as a part of each Early Childhood Screening program to provide for timely and proper identification and treatment of problems.

Data collected on individuals through Early Childhood Screening are private, and no data are disclosed to a third party (including school district personnel) without written parental consent. With parental consent, appropriate information on individual children is to be incorporated into school district student health records. All information is available to parents on request.

Early Childhood Screening facilitates and ensures Minnesota's 3 1/2 to 4 1/2 year old children access to early childhood education, ongoing pediatric (health) services and, where applicable, special services for the handicapped. These are the three focal points of mass early childhood screening programs outlined in the major study of preschool screening by Lichtenstein and Ireton (Preschool Screening: Identifying Young Children with Developmental and Educational Problems, Orlando, Florida: Grune & Stratton, Inc., 1984).

The Department of Education administers the Early Childhood Screening program in consultation with the Departments of Health and Human Services. Within the Department of Education, important links have been established among the early childhood programs of Early Childhood Screening (Pupil Personnel Services Section), Early Childhood Family Education (Community Education Section), Early Childhood: Special Education (Special Education Section), Early Childhood (Elementary and Secondary Education Section). The intent is to consolidate the efforts of statewide early childhood programs and services. Successful inter-agency coordination promotes cost beneficial and productive programs and services by:

1. utilizing consistent screening standards and professional consultation,
2. avoiding duplication of services to children and families,
3. coordination with established networks for diagnostic and treatment services,
4. assisting local school districts in meeting the federal Child Find mandate to identify special education handicapped children at a young age.

The usual age of the child being screened is between 3 1/2 and 4 1/2 years of age. With the introduction of the Early Childhood and Family Education Program, some districts are finding that parents are seeking the screening service at a younger age.

STATEWIDE PROGRAM RESULTS FOR THE 1985-86 SCHOOL YEAR

PARTICIPATION IN EARLY CHILDHOOD HEALTH AND DEVELOPMENTAL SCREENING

All school districts provided for Early Childhood Screening in 1985-86. Participation by parents and children in this voluntary program continues to be very high. Many districts report a rate exceeding 90%. In some smaller districts, where census tract data are used to identify and invite each eligible child to the service, all eligible children are screened. The level of participation varies inversely with the size of the school district. Lack of a mechanism to identify each and every child and factors of mobility and utilization of services other than Early Childhood Screening continue to affect participation in the larger communities. Table 1 shows the percentage of children screened statewide in 1985-86, and summarizes the number and percentage of eligible children and children screened for the past eight years. Table 2 breaks down the 1985-86 percentages according to school district size.

Table 1. Number and Percent of Children Participating in Early Childhood Screening

School Year	Eligible Children	Children Screened	Percent Screened
1978-79	53,067	42,036	78%
1979-80	53,048	41,635	78%
1980-81	55,556	44,302	80%
1981-82	54,954	45,737	83%
1982-83	58,202	46,986	81%
1983-84	57,823	48,588	84%
1984-85	60,476	49,350	82%
1985-86	62,105	49,418	80%

Table 2. Percentage of Participation in Early Childhood Screening By Size of School District (1985-86)

District Size (by number of eligible children)	No. of districts in this category	Percent of eligible children screened
Over 830	12	74%
200 - 830	66	77%
90 - 200	75	77%
45 - 90	92	89%
1 - 45	163	89%

School districts usually schedule screening in the spring. This leaves the remainder of spring and early summer for a more complete assessment of children who have been identified as having health or educational problems. Those with educational handicaps can then enroll in a special education program in the fall and receive a full year of service, if need be, prior to kindergarten enrollment. Those with health problems or in need of educational enhancement also have time for remediation, adjustment to change (such as eyeglasses), and time to benefit from educational interventions offered by parents and/or through community education's Early Childhood Family Education programs.

COMPONENTS OF EARLY CHILDHOOD HEALTH AND DEVELOPMENTAL SCREENING

The Early Childhood Screening program has three phases: **outreach**, **screening**, and **follow-up**. Each requires an equal amount of time, energy, and, to some extent, resources. Without adequate **outreach**, participation rates would be low. Evidence of excellent outreach is the high participation rate of the program. The **screening** is obviously the most visible portion of the program, with the required and optional components of the program being administered to children. Essential to any screening program is **follow-up**; if adequate follow-up is not provided, the worth of the program is in question. This section reports on the screening components and reports some of the follow-up data.

Required components (vision screening; hearing screening; growth screening: height and weight; health history and immunization reviews; developmental screening: speech/language, fine and gross motor, social/emotional, cognitive; and the summary interview) of Early Childhood Screening address the sensory and developmental needs of young children. Also, health concerns are discussed with parents when they provide information about the child's health history and immunization status. Growth patterns are noted through height and weight measurement, and important baseline data is established for monitoring growth throughout the elementary and secondary school years. In the summary interview with parents, findings of each component are reviewed to ensure that they understand the procedures and the findings. The relationships among the findings of the various components are discussed, any need for further assessment is explained and a plan of action is determined. The options provided by various school and community resources are discussed. Nearly all children and parents who attend Early Childhood Screening elect to participate in each of these components.

Optional components (physical inspection, laboratory tests, dental inspection, nutritional assessment) focus on the physical health of the child. For the past three years, nearly half of school districts have provided both the required components and one or more of the optional components of Early Childhood Screening. Reasons given by Early Childhood Screening coordinators for providing a comprehensive program include maintaining continuity of services from one year to the next, ease of including optional components especially when offered by school district personnel or the county public health agency (Early and Periodic Screening), economic status of the community requiring special services for children whose families could not or would not afford regular health care and early identification of special problems, and maintaining good community relations between the school and parents. Table 3 lists the percentage of districts offering one or more optional components in 1985-86. Besides the optional components noted below, some districts added blood pressure readings and fingerprinting, a child safety program. Sixty-one percent (61%) of districts offered only the required components in 1985-86, an increase of five percent over past years in districts offering only the core program.

Table 3: Percent of Districts Offering Early Childhood Screening Optional Components (1985-86)

Component	Percent of Districts
Physical Inspection	23%
Laboratory Tests	19%
Dental Inspection	34%
Nutritional Assessment	30%

The only way districts are able to manage the cost of optional components is by charging parents a fee on a sliding scale (22% of districts offering optional components charge a fee from $3 to $16), by receiving donations from community volunteer groups, parent groups, community health services and/or assuming the cost through local district foundation aid or other funds. In the future Early Childhood Family Education (Community Education program) resources may be applied to optional components of Early Childhood Screening if this service is identified by the district and community as a priority program. In summary, the provision of optional components is dependent upon interest in the community and availability of resources.

HEALTH AND DEVELOPMENTAL CONCERNS IDENTIFIED

Sources of Findings

Two sources of provide data for the description and summary of Early Childhood Screening that follows:

1. Annual Completion Report and Request for Reimbursement. This form, required from each district, provided information on census, program costs, and personnel providing the screening.

2. Report of Findings and Outcome. This form, completed on a voluntary basis by some school districts, gave insight into the number of specific health and developmental problems identified and preliminary outcomes of referrals made. In 1985-86, 136 forms were returned providing information on 12,900 children or 26% of the total number of children screened.

For the sake of clarity in reading, the summaries of developmental and health findings have been separated. It should be emphasized that these two aspects are not separate entities in children, but are interwoven. Following the actual screening of a child, the summary interview with the parent focuses on the overall picture of the child and helps parents to realize the interrelatedness of health and development.

Summary of the Developmental Aspects of Early Childhood Screening

Developmental screening reviews the child's **speech, language, gross and fine motor control, social and emotional status,** and **cognitive abilities.** These are examined through the use of standardized screening tools as well as through observation and parent information.

The screening results from 1985-86 indicate that the trend that most problems were developmental, especially in the area of speech and language. Table 4 shows the data from the developmental screening of 12,900 children. In interpretating the table it should be noted that all "findings" identified during Early Childhood Screening are not referred immediately for further evaluation, but in all cases the parents are made aware of any deviations from the norm. These children are rescreened, and when appropriate, in consultation with the parent, referrals are made.

Table 4: Percentage of Children Screened — Findings and Referrals of Developmental Components through Early Childhood Screening (1985-86)

Component	Findings	Referrals
Speech and Language	9.2%	8.2%
Gross Motor Control	4.1%	3.3%
Fine Motor Control	4.0%	3.1%
Social/Emotional	1.9%	1.6%
Cognitive	5.6%	4.5%
(sample of 12,900 children)		

School district personnel find information on types of problems valuable in projecting needs for curricula, student service programs, teachers, and special programs, and realize the value of early intervention in the treatment of developmental problems. Most parents also recognize the advantages of early intervention; school readiness, and the ability to succeed in school remain major concerns. Most appreciate the availability of screening and the opportunity to begin intervening treatment when indicated. Some ECS coordinators report that there are more and more developmental problems each year. Others state that parents' awareness of their young children's growing and developing has increased due to an emphasis on early childhood education. Statements such as the following reflect the value of the screening service:

"We had an unusual number of developmental and speech rechecks. We seem to have more pre-schoolers for our program next fall than we have room for."

"Over the years, our findings are consistent - high numbers of speech and language problems. In other areas, children often have multiple developmental problems."

"About 10 percent present discipline/behavior/developmental problems. There are consistent questions on behavioral issues. Young parents and some single parents, in particular, have alot of needs."

"Parents are more aware of developmental stages when they bring a second child for screening."

Other comments on the voluntary reports reflect the need for continual improvement in developmental screening through parent education and information about the developmental tools used. Screeners requested inservice training programs to improve their skills. Further evaluation and improvement in the sensitivity of the screening tools needs to be done.

More and more districts are planning and implementing early childhood programs - classes for four-year olds that have been identified at screening, parenting, and support group activities through newly developed Early Childhood Family Education programs. "There is a great need for young parents and children to have social contact and knowledge of child development" reports a rural ECS coordinator. Many districts also commented on the benefits of working with the Interagency Early Learning Committees being developed in each county. Screeners are able to refine their screening tools, to set up referral links to ensure young children identified with problems are assessed appropriately, and to share staff, equipment, and educational materials.

Summary of the Health Aspects of Early Childhood Screening

The purpose of assessing children's health status is to ensure they are well equipped--healthy--so they can make the most of their current and future learning and growing experiences. Table 5 shows the data from the health screening of 12,900 children. As with Table 4, it should be pointed out that not all findings are referred immediately for further evaluation, but parents are made aware of any deviation from test norms.

Table 5: Percentage of Children — Findings and Referrals of Required Health Screening Components (1985-86)

Component	Findings	Referrals
Vision	3.9%	3.1%
Hearing	8.0%	6.7%
Growth	0.6%	0.2%
Health History	2.5%	2.0%
Immunization Review	7.0%	7.0%
(sample size: 12,900 children)		

Vision screening and hearing screening offer the opportunity to assess the sensory functions vital to learning and developing. The identification and referral of other health related concerns can also increase the child's "chances for optimum school readiness." According to district reports parents are not always aware of or addressing the sensory and health problems of their children. The following statements from Early Childhood Screening screeners substantiate this:

> "We are again finding children with significant vision or hearing problems which parents were completely unaware of."
>
> "As always, quite a number of children have hearing problems... chronic infections, may need tubes, need monitoring. Hearing can impact language development, behavior, and so many other areas."
>
> "We discovered a child who had unilateral permanent hearing loss; the parents were not aware of this."
>
> "There were several with weight problems, too many empty calories - pop, chips, candy."
>
> "Many children are due for a booster shot but are basically on a regular immunization schedule. Several were far behind - one boy had not been to a physician since he was one month old and had no immunizations. ECS is a good time to remind parents of the requirement for school entrance."
>
> "Emphasis in past years has been on illness care. We are now seeing healthier children and are encouraging preventive medicine/health promotion."

Obtaining a **health history and immunization review** from parents revealed many health problems which have the potential of affecting learning. The reports submitted on 12,900 children reflect health problems affecting all of the various body systems (circulatory, respiratory, integumentary, endocrine, musculoskeletal, gastrointestinal, genitourinary, neurological, sensory). These health problems were reported by the parents and were, for the most part,

already being treated. Only 2.0% were referred to health professionals. Referrals were made for problems such as sexual abuse, severe anemia, cardiac conditions, seizures, orthopedic problems, and other problems that put young children at risk.

The Minnesota Department of Education in 1985 indicated that the deletion of a **physical inspection** to accompany the health history resulted in a decrease in identification and referral of students with physical health problems. In its Early Childhood Assessment Study, the University of Minnesota compared school districts that included a physical inspection component with those that did not. The findings showed that those districts which included a physical inspection identified nearly seven times as many health problems as those districts without the physical inspection.

In 1985-86, 23% of districts (see Table 3) chose to include a physical inspection (optional component) along with the health history. Some districts help finance this component, or parents are charged a fee in others. Still others receive contributions from community groups. Screeners wrote the following comments:

> "Program is not comprehensive without the physical component which is not possible in this district without funding."
>
> "The physical assessment and laboratory studies are provided in our district because most children have not had an exam since birth; health concerns need to be assessed and identified in order to be corrected prior to school entrance."
>
> Early detection of problems is very economical. Consider adding funding for physical and dental components."
>
> "Statistics in our county show 23 percent of families fall below the 125 percent poverty level (statewide average is 9.6 percent). This and other county statistics point to the need for early childhood health care. Optional and required components should be a part of the screening."

Lab work (optional component) is part of Early Childhood Screening in 19% of the districts. A blood sample is obtained from the finger in order to screen for possible anemia as well as exposure to lead. One reporter stated:

> "I would like to see the lab component returned to a required status. With the possibility of high lead levels in our young children and the potential but preventable consequences, it seems that this testing would not only give a handle on how widespread the problem might be but would screen children who probably are not receiving routine medical care."

The **dental component** (optional component) is included by 34% of districts. Early Childhood Screening coordinators have sought district and community funding for including this component. With the American Dental Association reporting that 50% of two year old children have one or more decayed teeth, many screeners feel dental inspection should be a required and state funded component. Early Childhood Screening providers report:

> "The number of 4-year olds who have never been to a dentist is amazing."

"There are many children that have inadequate dental care. More education is needed to emphasize early dental services."

"Early Childhood Screening aids us by pin-pointing certain areas that are usually neglected, most especially dental care and dental hygiene."

Encouraging initiation of routine dental visits accounted for the majority of referrals. Reports also mentioned some referrals were for gum disease, structural problems, and cavities.

In 1985-86, 30% of districts indicated doing the **nutritional assessment** (optional component) but there is some question as to the extent of the analysis being performed. Several districts indicated that the assessment was conducted by a registered dietician. Most often nutritional counseling is part of the summary interview. In this form it is a general overview with education about the basic requirements for young children. Many districts reported the need for more in-depth counseling.

"Children who have older siblings who were involved (screened) when nutrition counseling was a (required) component show evidence of better nutrition."

"I feel there is a great need for nutritional counseling for parents and definitely can substantiate this at the elementary and secondary levels."

"The nutrition component should be included and expanded with good educational resources available and a training program for volunteers as it is too expensive to hire professionals."

EARLY CHILDHOOD SCREENING STAFFING PATTERNS

Information on personnel providing screening for 1985-86 was gleaned from the Early Childhood Screening Annual Completion Report and Reimbursement Request completed by each district. School district personnel, county public health staff and employees of educational cooperatives were the primary providers. Physicians participate in very few programs, a significant change from 1981-1982 when 28% of the districts included physician screeners. There is also a shift toward utilizing the expertise of early childhood-special education professionals. Those who use a screening team which includes a special education professional would likely be in the best position to address both braod screening problems and special programs of handicapped children. With the added expertise comes the caution that, while Early Childhood Screening is a vehicle to identify handicapped children (and is named in the state's Special Education Plan as a Child Find program), it is not solely a Child Find program. Early Childhood Screening identifies a broader range of problems than those of children eligible for special education, and provides parental guidance to all participating parents.

Table 6 presents the statewide picture of how districts assigned providers.

Table 6: Personnel Providing Components by Percent of Districts (1985-86)

Screening Components	Licensed School Nurse	Public Health Nurse	Physician	Volunteer	Special Educator	Other
Vision and Hearing	21%	32%	0%	63%	5%	28%
Developmental	13	8	0	45	67	27
Height and Weight	21	22	1	66	0	16
Health History and Immunization Review	44	58	1	0	0	20
Summary Interview	38	50	1	0	12	28

Staffing patterns vary widely from small district to large districts. Usually small districts rely on the expertise of county public health staff and special education cooperative staff; large districts utilize school district employees. Table 7 displays the percentage of children screened by each type of provider rather than by percentage of school districts employing the staff.

Table 7: Personnel Providing Components by Percent of Children (1985-86)

	Licensed School Nurse	Public Health Nurse	Physician	Volunteer	Special Educator	Other
Vision and Hearing	55%	6%	0%	63%	8%	22%
Developmental	37	1	0	39	65	24
Height and Weight	47	7	.3	49	.2	31
Health History and Immunization Review	75	34	2	0	0	14
Summary Interview	80	20	2	0	7	22

PROGRAM COSTS

The statewide costs for Early Childhood Screening are listed in Table 8.

Table 8: Statewide Costs for Preschool Screening (1985-86)

Number of Children Screened	Reimbursement to Districts	Average Cost per Child in State Aids	Maximum Reimbursement per Child	Average District Cost per Child
49,418	$ 781,500	$ 15.81	$ 16.15	$ 24.91

While the statewide average expenditure was $15.81 -- below the state authorization-- it should be noted that 65% of districts expended more than $16.15 per child state aid limit. The remaining districts conducted the program at or below the state funding allowance.

School districts are required to report average screening costs by component to the Minnesota Department of Education. Table 9 shows the statewide averages for the past eight years.

Table 9: Actual Costs of Early Childhood Screening by Component 1978-79 - 1985-86

Screening Component	78-79	79-80	80-81	81-82	82-83	83-84	84-85	85-86
Vision & Hearing	$ 1.70	$ 1.41	$ 1.42	$ 2.40	$ 2.08	$ 2.11	$ 2.25	$ 2.22
Developmental	3.99	3.43	3.45	4.14	4.93	4.33	4.64	4.94
Height & Weight *					1.67	1.11	1.25	1.09
Health History	3.22	3.41	3.15	4.32	3.07	4.17	3.44	3.61
Summary Interview *					2.95	3.87	3.17	3.84
Other Costs	5.60	5.36	5.32	7.33	5.66	8.55	7.65	9.21
Subtotal (Required)	$14.51	$13.61	$13.34	$18.19	$17.60	$22.38	$22.40	$24.91
Physical Inspection	6.73	6.65	7.67	11.19	3.93	3.64	4.79	5.14
Laboratory Tests	2.82	3.17	4.15	4.58	1.98	2.45	3.01	3.05
Dental Inspection	1.81	1.75	1.63	1.84	1.46	.75	1.02	1.21
Nutrition Assessment	1.68	1.40	1.60	2.08	.79	.79	1.93	2.00
Subtotal (Optional)	$13.04	$12.97	$15.05	$19.69	$ 8.16	$ 7.63	$10.75	$11.38
TOTAL	$27.55	$26.58	$28.39	$37.88	$28.52	$30.01	$33.15	$36.29

* These components were not reported as separate costs in previous years.

Although the average cost per child in requested state aids was $15.81, calculation of actual costs shows $24.91 being expended, on the average, in Early Childhood Screening for required components. Costs vary widely from district to district. For example, some districts report vision and hearing screening costs as high as $4.03 per child screened (statewide average, $2.22), the screening being provided by licensed school nurses and audiologists. Many other districts report no cost for this component as it is conducted by volunteers. In these cases, however, districts are not reporting the training, supervision, and equipment costs for vision and hearing screening. Similarly, the developmental component expenses have been as high as $15.12 per child screened, reflecting professional providers such as early childhood special education staff, school psychologists or speech and language specialists. In contrast, nearly one half of the 36 districts utilize volunteers at a low cost, some reporting the expenses of annual training and supervision of these screening providers. This wide range in costs also exists in other components.

As emphasized in the description of the Early Childhood Screening phases (page 7), **outreach**, **screening activities** and **follow-up** are all essential. District ECS coordinators were asked to itemize outreach and follow-up costs for

the first time in 1985-86. Previously, these costs were included in "other costs." The statewide average outreach cost for 1985-86 was $2.52 per child screened. This included developing public announcements, secretarial time for scheduling screening appointments, postage. Effective outreach accounts for the very high participation rates.

Follow-up costs averaged $2.70 per child. Parents of children who have been referred are contacted to ensure that timely and proper assessment and remediation of problems occurs. Many districts report no cost for follow-up, depending on in-kind contribution of K-12 staff because resources of ECS are limited. Therefore, follow-up activities may be jeopardized. Yet, one of the basic principles of screening programs is that without adequate follow-up, the benefit of screening is questionable.

In addition to outreach and follow-up costs, districts expended an average of $3.99 in other costs for administrative planning and evaluation, secretarial support, travel, rent, and the like. These three costs--outreach, follow-up, and administrative costs--are reported together as $9.21 for "other costs" for 1985-86.

Local funds, some special education funds and community education revenues are used to supplement the program. The low rate of increased costs over the years is due to efficiency of school personnel gained from experience in the long-term screening of children and due to continued use of volunteers and in-kind resources, often not included in dollar estimates.

SUMMARY OF FINDINGS - 1985-86

1. 49,418 children were screened in 1985-86, 80% of eligible children at a cost to the state of $781,500.

2. Cost to the state for Early Childhood Screening averaged $15.81 per child for required components; the state aid rate for required components was $16.15 per child screened. Calculation of actual costs shows $24.91 being expended. Local funds, some special education funds, and community education revenue are used to supplement the program.

3. Participation rates per eligible children are higher among the smaller districts. Districts with up to 45 eligible children indicated 89% participation; the largest districts where the number of eligible children is greater than 830 showed 74% participation.

4. Depending on community needs and resources, 39% of districts provide one or more optional components of Early Childhood Screening. At the present time, Early Childhood Screening is a program which meets community needs and is not a statewide program provided equitably to all children ages 3½ to 4½ years as envisioned by the legislature when the program was established in 1977.

5. A wide variety of providers assisted with Early Childhood Screening, reflecting individual community resources and a multidisciplinary approach to the complex needs of young children.

6. Volunteers were used by 70% of districts in the screening of one or more of the required components. Volunteers require supervision, training and recruitment.

7. Increased communication and coordination with other early childhood programs (Early Childhood Family Education and Early Childhood: Special Education) continues to become more fully developed and available statewide.

8. More information regarding follow-up procedures and results needs to be obtained for a continuing evaluation of the Early Childhood Screening program.

9. Adequate funding needs to accommodate follow-up costs as well as costs of education to parents that is an integral part of the experience for all parents, whether or not their children are identified as having special needs requiring additional services.

REL:S206e
12/08/86

Minnesota Statutes - Early Childhood Health and Developmental Screening

PRESCHOOL HEALTH SCREENING

123.701 PURPOSE.

The legislature finds that early detection of children's health and developmental problems can reduce their later need for costly care, minimize their physical and educational handicaps, and aid in their rehabilitation. The purpose of sections 123.701 to 123.705 is to assist parents and communities in improving the health of Minnesota children and in planning educational and health programs.

History: *1977 c 437 s 1*

123.702 SCHOOL BOARD RESPONSIBILITIES.

Subdivision 1. Every school board shall provide for a voluntary program of early childhood health and developmental screening for children once before entering kindergarten. This screening program shall be established either by one board, by two or more boards acting in cooperation, by educational cooperative service units, by early childhood family education programs, or by other existing programs. No school board may make this screening examination a mandatory prerequisite to enroll a student. The school districts are encouraged to reduce the costs of preschool health screening programs by utilizing volunteers in implementing the program.

[For text of subds 1a to 7, see M.S.1984]

History: *1Sp1985 c 12 art 6 s 2*

Subd. 1a **Components.** A screening program shall include at least the following components to the extent the school board determines they are financially feasible: developmental assessments, hearing and vision screening, review of health history and immunization status, and assessments of height and weight. All screening components shall be consistent with the standards of the state commissioner of health for early and periodic screening programs. No child shall be required to submit to any component of this screening program to be eligible for any other component. No screening program shall provide laboratory tests, a health history or a physical examination to any child who has been provided with those laboratory tests or a health history or physical examination within the previous 12 months. The school district shall request the results of any laboratory test, health history or physical examination within the 12 months preceding a scheduled screening clinic. A school board may offer additional components such as nutritional, physical and dental assessments, blood pressure, and laboratory tests. State aid shall not be paid for additional components.

Subd. 2. If any child's screening indicates a condition which requires diagnosis or treatment, his parents shall be notified of the condition and the school board shall ensure that an appropriate follow-up and referral process is available, in accordance with procedures established pursuant to section 123.703, subdivision 1.

Subd. 3. The school board shall actively encourage participation in the screening program.

Subd. 4. Every school board shall contract with or purchase service from an approved early and periodic screening program in the area whenever possible.

Subd. 5. Every school board shall integrate and utilize volunteer screening programs in implementing sections 123.702 to 123.704.

Subd. 6. A school board may contract with health care providers to operate the screening programs and shall consult with local societies of health care providers.

Subd. 7. In selecting personnel to implement the screening program, the school district shall give priority first to qualified volunteers and second to other persons possessing the minimum qualifications required by the rules adopted by the state board of education and the commissioner of health.

History: *1977 c 305 s 45; 1977 c 437 s 2; 1979 c 334 art 6 s 12,13; 1981 c 358 art 6 s 14; 1982 c 548 art 6 s 5; 1983 c 314 art 6 s 7*

123.703 STATE BOARD OF EDUCATION AND STATE COMMISSIONER OF HEALTH; RESPONSIBILITIES.

Subdivision 1. School boards shall administer the screening programs pursuant to rules adopted by the state board of education. Prior to the adoption of the rules, the state board shall solicit information or opinions pursuant to section 14.10. Copies of the proposed rules shall be sent to the state commissioner of health and each school board in the state on or before the date of publication. The state board of education shall consider the standards employed by the state commissioner of health for early and periodic screening programs in drafting the proposed rules. The rules adopted by the state board of education and the commissioner of health to govern the screening program shall unconditionally permit registered nurses to perform those components of the screening program that can be performed by a nurse.

Subd. 2. The state board of education, in cooperation with the state commissioner of health and health service providers, shall provide technical assistance, including training, and general information and consultation services to school boards.

Subd. 3. **Report.** The state board of education, in cooperation with the state commissioner of health, shall report to the legislature by February 1 of each year on the results of the screening programs in accomplishing the purposes specified in section 123.701. The report shall include information on the rates of children's participation in screening programs, on districts' costs for implementing the various components of the screening program, and on any exemptions granted from screening requirements because of financial infeasibility.

History: *1977 c 305 s 45; 1977 c 437 s 3; 1979 c 334 art 6 s 14,15; 1981 c 358 art 6 s 15; 1982 c 424 s 130*

123.704 DATA USE.

Data on individuals collected in screening programs established pursuant to section 123.702 is private, as defined by section 13.02, subdivision 12. Individual and summary data shall be reported to the school district by the health provider who performs the screening services, for the purposes of developing appropriate educational programs to meet the individual needs of children and designing appropriate health education programs for the district; provided, no data on an individual shall be disclosed to the district without the consent of that individual's parent or guardian.

History: *1977 c 437 s 4; 1981 c 311 s 39; 1982 c 545 s 24*

123.705 HEALTH SCREENING AID.

Subdivision 1. **Aid amounts.** The department of education shall pay each school district for the cost of screening services provided pursuant to sections 123.701 to 123.705. The payment shall not exceed $15.60 per child screened in fiscal year 1985, $16.15 per child screened in fiscal year 1986 and $8.15 per child screened in fiscal year 1987.

Subd. 2. **[Repealed, 1Sp1985 c 12 art 6 s 31]**

History: *1Sp1985 c 12 art 6 s 3*